

REMARKS

Favorable reconsideration of this application, in light of the preceding amendments and following remarks, is respectfully requested.

Claims 34-58, 60-72 and 74-84 are pending in this application. Claims 34, 56, 60, 64, 65, 66, 68, 70, 71 and 74 are amended and claims 59 and 73 have been cancelled. Claim 84 has been added. Claims 34 and 71 are the independent claims.

Applicants note with appreciation the Examiner's acknowledgement that certified copies of all priority documents have been received by the U.S.P.T.O. Action, summary at 12.

Applicants also respectfully note the present action indicates that the drawings have been accepted by the Examiner. Action, summary at 10.

Support for Claim Amendments and New Claims

By the present Amendment, Applicants submit that claims 34, 56, 60, 64, 65, 66, 68, 70, 71 and 74 have been amended and claim 84 has been added. Support for these claim amendments and new claim 84 can be found at least in the Specification as originally filed. In particular, support for the amendments to claims 34, 70 and 71 can be found at least on page 11, lines 19-21, page 12, lines 30-33 and page 13, lines 8-10 and support for new claim 84 can be found at least on page 8, lines 31-33. As such, Applicants submit that no new matter has been added.

Claim Objections

Claims 1, 56, 59, 60, 68, 70, 71 and 73 have been objected to because of various informalities. Appropriate correction has been made. Therefore, Applicants respectfully request that the objections to claims 1, 56, 59, 60, 68, 70, 71 and 73 be withdrawn.

Example Embodiments of the Present Application

A non-limiting example embodiment of a system and a method for detecting deformation of an elastic structure, particularly which is subjected to a force under motion, is explained on page 2, line 36 – page 3, line 34 of the present specification.

Example embodiments provide a system and a method for measuring nip force, nip pressure, etc., in a nip roll press, which is used in manufacturing a sheet material such as paper. The system may include a sensor with which the elastic structure to be monitored is provided, and a detector. The sensor may include a first and a second electrode, and a piezoelectric material. When the sensor is deformed, a voltage is generated between the first and second electrodes. The sensor may further include a first sensor conductor connected to the first electrode and a second sensor conductor connected to the second electrode. The first and second sensor conductors are arranged as antennas. The detector may include a receiver antenna which is arranged adjacent to the elastic structure for capacitively sensing the voltage between the first and second sensor conductors.

Therefore, the force/pressure distribution in the elastic structure, for example along the nip in a nip roll press, can be determined without the need for energizing elements, e.g., a power source such as a battery, to be provided on the elastic structure. By eliminating the need to stop the motion to replace a battery or replace broken electronic components, the robustness and the reliability of the system are improved.

Rejections under 35 U.S.C. § 102

Claims 34, 35, 40, 41, 44, 49, 50, 56, 58, 60, 63, 66 and 70-73 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Mancosu et al. (WO 01/68388, hereinafter "Mancosu"). Applicants respectfully traverse this rejection for the reasons detailed below.

The Office Action stated that Mancosu teaches a system for detecting at least one physical characteristic of an elastic structure (tire 1) subjected to a force under a motion (abstract), said structure being provided with at least one sensor (7) comprising two electrodes (transmitter and receiver, 903 and 904) and a piezoelectric material (10), which upon deformation generates a charge displacement in the material giving rise to a voltage being directly proportional to the force causing the deformation and convertible to a signal representing said characteristic, and said system comprising at least one detector comprising a receiver for receiving said signal representing said characteristic, wherein said sensor is a passive sensor comprising a passive transmitter in the form of a conductor extending from an end of said sensor, and that a coupling capacitance is obtainable between the conductor and a receiving conducting element thus enabling contactless signal transmission therebetween.

The Examiner does not point out (nor can Applicants find) where Mancosu discloses first and second sensor conductors which are connected to first and second electrodes, respectively, and arranged as antennas as is recited in amended independent claims 34 and 71. Furthermore, the Examiner does not point out (nor can Applicants find) where Mancosu discloses a detector including a receiver antenna which is arranged adjacent to the elastic structure (the tire in Mancosu) for capacitively sensing the voltage between the first and second sensor conductors as is recited in independent claim 34.

In addition, one skilled in the art would not eliminate the (radio) transmitter present in the tire of Mancuso (page 32, lines 6-10) in order to attempt to sense signals from the sensor (reference numeral 7 in Fig 2) through the tire.

The Applicants, therefore, respectfully request that the rejection to Claims 34 and 71 under 35 U.S.C. § 102(b) be withdrawn.

Claims 35, 40, 41, 44, 49, 50, 56, 58, 60, 63, 66, 70, 72 and 73, dependent on independent claims 34 and 71, are patentable for the reasons stated above with respect to claims 34 and 71 as well as for their own merits.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection to independent claims 34 and 71 and all claims dependent thereon.

Rejections under 35 U.S.C. § 103

Mancosu in view of Moschel

Claims 35-38, 42, 43, 45-48, 51-53, 61, 62, 76 and 78-82 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancosu in view of Moschel (US 5,592,875, hereinafter “Moschel”). Applicants respectfully traverse this rejection for the reasons detailed below.

With respect to claims 35-38, 42, 43, 45-48, 51-53, 61, 62, 76 and 78-82, Applicants incorporate the discussion presented above with respect to the deficiencies of Mancosu to teach or suggest the first and second sensor conductors or a detector including a receiver antenna as recited in claims 34 and 71. As claims 35-38, 42, 43, 45-48, 51-53, 61, 62, 76 and 78-82 depend from claims 34 and 71, Applicants submit that claims 35-38, 42, 43, 45-48, 51-53, 61, 62, 76 and 78-82 are equally allowable over the applied references.

The Applicants, therefore, respectfully request that the rejection to Claims 35-38, 42, 43, 45-48, 51-53, 61, 62, 76 and 78-82 under 35 U.S.C. § 103(a) be withdrawn.

Mancosu in view of Moschel and further in view of Bentele

Claim 39 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancosu in view of Moschel and further in view of Bentele et al. (US 5,908,537, hereinafter “Bentele”). Applicants respectfully traverse this rejection for the reasons detailed below.

With respect to claim 39, Applicants incorporate the discussion presented above with respect to the deficiencies of Mancosu to teach or suggest the first and second sensor conductors or a detector including a receiver antenna as recited in claims 34 and 71. As claim 39 depends from claim 34, Applicants submit that claim 39 is equally allowable over the applied references.

The Applicants, therefore, respectfully request that the rejection to Claim 39 under 35 U.S.C. § 103(a) be withdrawn.

Mancosu in view of Moschel and Hatanaka

Claims 54, 55 and 83 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancosu in view of Moschel and further in view of Hatanaka et al. (US 5,565,219, hereinafter “Hatanaka”). Applicants respectfully traverse this rejection for the reasons detailed below.

With respect to claims 54, 55 and 83, Applicants incorporate the discussion presented above with respect to the deficiencies of Mancosu to teach or suggest the first and second sensor conductors or a detector including a receiver antenna as recited in claims 34 and 71. As claims

54, 55 and 83 depend from claims 34 and 71, Applicants submit that claims 54, 55 and 83 are equally allowable over the applied references.

The Applicants, therefore, respectfully request that the rejection to Claims 54, 55 and 83 under 35 U.S.C. § 103(a) be withdrawn.

Mancosu in view of Maenpaa

Claims 67 and 75 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancosu in view of Maenpaa (US 6,910,376, hereinafter “Maenpaa”). Applicants respectfully traverse this rejection for the reasons detailed below.

With respect to claims 67 and 75, Applicants incorporate the discussion presented above with respect to the deficiencies of Mancosu to teach or suggest the first and second sensor conductors or a detector including a receiver antenna as recited in claims 34 and 71. As claims 67 and 75 depend from claims 34 and 71, Applicants submit that claims 67 and 75 are equally allowable over the applied references.

The Applicants, therefore, respectfully request that the rejection to Claims 67 and 75 under 35 U.S.C. § 103(a) be withdrawn.

Allowable Subject Matter

Applicants appreciate the Examiner’s indication that claims 57, 64, 65, 68, 69 and 74 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

However, Applicants do not believe that amending is necessary at this time for the reasons detailed above.

CONCLUSION

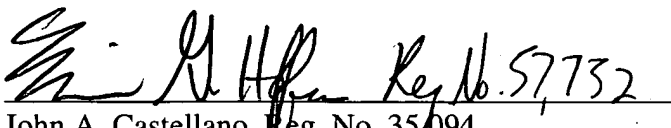

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 34-83 in connection with the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Erin H. Hoffman, Reg. No. 57,752 at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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